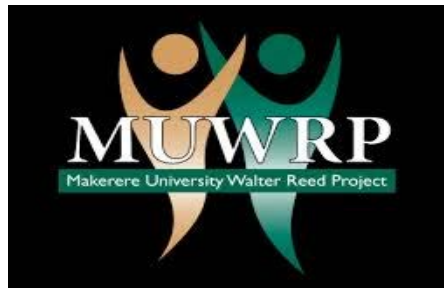


Advanced disease in AFRICOS

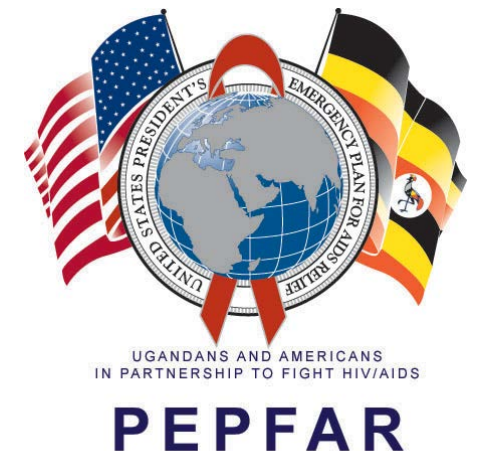
Dr Hannah Kibuuka

PI (Uganda)

Makerere University Walter Reed Project (MUWRP)



2nd Annual PEPFAR Uganda Science Summit
Reaching and Maintaining Epidemic Control
January 2021
Kampala Uganda (virtual)



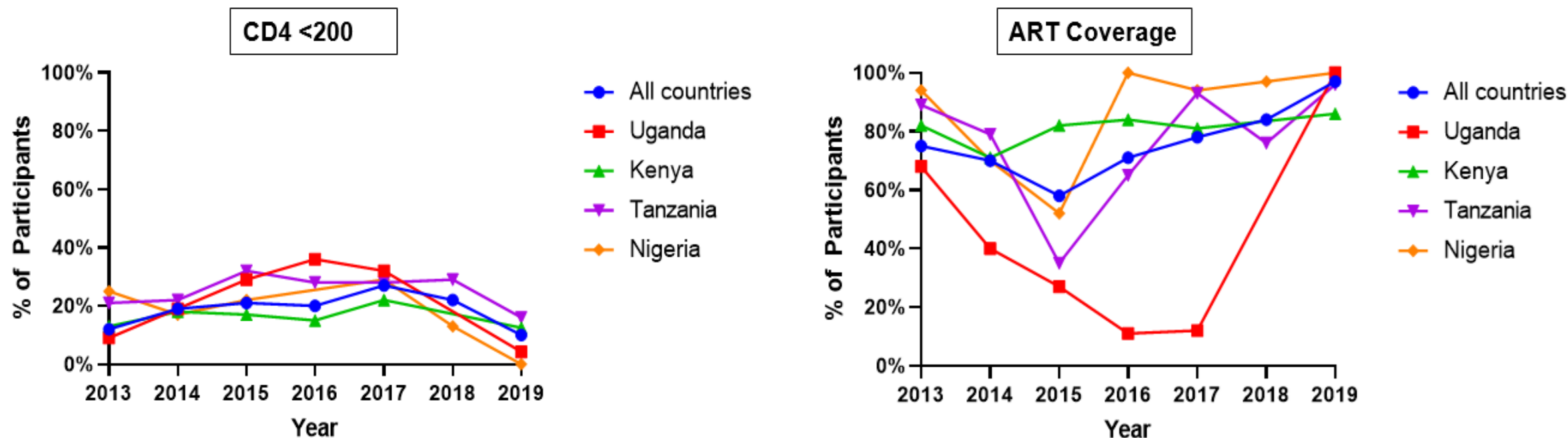
Project Design, Methods and Implementation Status

- AFRICOS is a long term prospective observational cohort study at 12 sites East Africa and Nigeria
- Broad primary objective:
 - Longitudinally assess the impact of clinical practices, biological factors and socio-behavioral issues on HIV infection and disease progression in an *African* context
- Enrolling adult and adolescent (15-17 yrs) volunteers in MHRP-PEPFAR care & treatment with goal of:
 - 3,500 people living with HIV (PLWH)
 - 700 people without HIV
- As of September 1, 2020, **2,948 PLWH** were enrolled in AFRICOS
- We present advanced disease and factors associated with it

2nd Annual PEPFAR Uganda Science Summit January 2021



Results: Trends in Percentage of Participants with CD4 <200 and ART coverage at Study Enrollment by Country and Year



- Of 2903 with CD4 results at enrollment, 567 (19.5%) had CD4 <200
- Despite consistent increases in ART coverage since 2016, the prevalence of AHD did not decline below levels observed in 2013 until 2019
- ART coverage increased from 74.7% (range 68.3–93.8%) in 2013 to 97.5% (range 86–100%) in 2019, $p = <0.01$

Results: Factors associated with CD4 <200 cells/mm³ at Enrollment

		Adjusted OR ¹	95% CI
Country	Uganda	-	
	Kenya	1.11	0.83–1.49
	Tanzania	1.48	1.06–2.07
	Nigeria	1.25	0.81–1.92
Sex	Male	1.33	1.08–1.62
	Female	–	–
Age	18-29	–	–
	30–39	1.50	1.11–2.02
	40–49	1.61	1.18–2.20
	50+	1.91	1.33–2.75
Education	None or some primary	–	–
	Primary or some secondary	1.57	1.23–2.02
	Secondary and above	1.48	1.10–1.99
WHO Stage	I	–	–
	II	2.17	1.65–2.84
	III	3.30	2.50–4.35
	IV	2.63	1.64–4.21

¹Variables included in the adjusted model were enrollment country, sex, age, education, WHO stage, time since HIV diagnosis, and duration on ART

Dr. Ikwo Oboho, HIV Care and Treatment Branch, Division of Global HIV and TB, U.S. Centers for Disease Control and Prevention, Atlanta, GA, USA

Results: Factors associated with CD4 <200 cells/mm³ at Study Enrollment

		Adjusted OR ¹	95% CI
Time since HIV diagnosis	<1 year	–	–
	1–5 years	0.46	0.33–0.64
	>5 years	0.30	0.19–0.45
Duration on ART ²	ART naïve	–	–
	<6 months	0.77	0.58–1.02
	6 months–<2 years	0.60	0.42–0.85
	2– <4 years	0.40	0.25–0.65
	>=4 years	0.42	0.27–0.67

- Summary
 - Factors associated with a higher risk of CD4 <200 at enrollment were being enrolled in Tanzania, male sex, age >29 years, having more education, and having a higher WHO clinical stage
 - Factors associated with a lower risk of CD4 <200 were >1 year since HIV diagnosis and being on ART for at least 6 months

²Duration on ART was ascertained prior to CD4 measurement at enrollment. Participants enrolled were either ART naïve or already on ART

Dr. Ikwo Obobo, HIV Care and Treatment Branch, Division of Global HIV and TB, U.S. Centers for Disease Control and Prevention, Atlanta, GA, USA

In Uganda

- Jan 2013-Dec 2020, there were 101 participants with a CD4 <200 cells/mm³ at the enrollment visit; 74% remain enrolled in AFRICOS: 20 deaths, 6 LTFU
- 72/101 (71.3%) participants had an AIDS-defining illness
 - 36 (50%) participants diagnosed with HIV-wasting
 - 29 (40%) participants diagnosed with TB
 - 13 (18%) diagnosed with Kaposi Sarcoma
 - 6 (8%) diagnosed with non-PCP Pneumonia
 - 1 (1.4%) each with PCP and Candidiasis of esophagus
- Since January 1, 2019, 17 (4%) participants from Uganda had at least one visit with a CD4 <200 cells/mm³
 - 14 participants had an AIDS-defining illness: 10 participants with HIV-wasting, 4 participants diagnosed with TB, 2 participants diagnosed with Kaposi Sarcoma

Implications for Epidemic Control Efforts

- Build HCW capacity in screening, identification & management of AHD. i.e Cryptococcal meningitis, TB and KS.
- Support prompt/early HIV diagnosis.
- Increase funding or provision of laboratory commodities for identification and management of AHD.
- Build laboratory workers capacity to diagnose AHD.
- Support & strengthen M& E systems to be able to monitor the magnitude of AHD at facility, district & National level.

Acknowledgments and Contact Info

MHRP

Clinical Research Directorate:

Trevor Crowell
Emma Duff
Leigh Anne Eller
Alex Golway
Jaclyn Hern
Michelle Imbach
Kara Lombardi
Ajay Parikh
Zahra Parker
Christina Polyak
Steven Schech
Badryah Omar

Department of International HIV Prevention and Treatment:

Patricia Agaba
Kim Bohince
Priyanka Desai
Elizabeth Lee

HDRL:

Brook Danboise
Joanna Freeman

Jennifer Malia
Sheila Peel

DCAC:

Daniel Choi
Danielle Bartolanzo
Nicole Dear
Allahna Esber
Leilani Francisco
Mark Milazzo
Alexus Reynolds
Katherine Song

MHRP/WRAIR Leadership:

Sandhya Vasan
Julie Ake

AFRICOS Uganda

Hannah Kibuuka
Betty Mwesiwa
Michael Semwogerere
Allan Tindikahwa

AFRICOS Kenya

South Rift Valley:

Alex Kasembeli
Raphael Langat
Rither Langat
Jonah Maswai
Fred Sawe

Kisumu West:

Solomon Otieno
John Owouth
Winnie Rehema
Valentine Singoei

AFRICOS Tanzania

Emmanuel Bahemana
Reginald Gervas
Samoel Khamadi
Lucas Maganga
John Ngejite
Mkunde Chachage

AFRICOS Nigeria

Yakubu Adamu
Tunde Adegbite
Uzoamaka Agbaim
Mfreke Asuquo
Nnamdi Azuakola
Nkechinyere Harrison
Michael Iroezindu
Abdulwasiiu Tiamiyu
Asogwa Ugochukwu

UCSF

Susan Meffert
Benedetta Millanini
Victor Valcour
Kelly Blum

University of Munich

Christof Geldmacher
Arne Kroidl
Inge Kroidl

Contact: Hannah Kibuuka hkibuuka@muwrp.org

2nd Annual PEPFAR Uganda Science Summit January 2021



OK to share slides with attendees and public after Summit?

- **Please indicate Yes or No**
- **Yes**